Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Patent of William Hutton of Sheffield, for a method of making sickles and Reaping Hooks.

Dated July, 1809.

These hooks have flat blades, all of one thickness, strengthened with backs attached to them, either by rivets, or by holding them tightly in a grove formed in each, in the same manner as the backs of the finer saws are constructed.

The following directions are given by the Patentee for forming these Hooks, "Take a piece of steel, hammer or roll it, to the proper thickness, then cut or pare it into the form of a sickle or reaping hook: then tooth the blade in the usual manner, if it is intended for a sickle; next harden the blade in the hardening mixture now used for saws, and give it a temper, or colour, according to the quality of the steel, of which it is made, then set and grind it. The back may he made and affixed to the blade in the following manner. Take a piece of iron or steel, hammer or draw it into the form of a back of a sickle, or hook, fit it to the blade; then drill holes through both it and the blade to correspond with each other, and fasten them together with rivets or screws.

The backs may be also made in the following manner; take a piece of iron or steel, roll, forge, hammer or cast it, to the proper thickness, and pare it to a breadth proper for the purpose you intend it, then double it by means of a vice, stamp, or fly press; then fasten the *tang* unto or into the back, either by welding or brazing; then hammer the back upon a stithy, or block of iron or steel, so that it may be flat and level, then close the edges nearly together, taking care to leave the back part more open than the edge, in order that it may form a spring for the purpose of holding itself fast to the blade, which done, put the blade into a vice, and force on the back through its nearly closed edges, with a hammer, or force the blade into the back by a wooden hammer, striking on the edge of the blade.

In this latter mode any number of rivets or screws thought proper, may be also added, to fasten the back to the blade more effectually.

Account of the Flat Roof of the cotton mill of Messrs. M‘Crum, Leppers & Co. Belfast; and of the Composition used in constructing it, and other roofs, vallies, and Gutters in this vicinity.

The roof of the cotton mill lately erected by Messrs. M‘Crum, Leppers & Co. near the poor house of Belfast, is quite flat. It is 196 feet long, and 38 feet broad, and has a part elevated about 5 inches above the rest, running all round it next the parapet, 6 feet broad, like a raised foot way; which forms a shallow pond in the middle, to hold a depth of about 4 inches of water; from which pipes descend to admit it to every story in the mill. The house for the steam engine, and for the steam boilers, which is a few feet detached from the other buildings, has also a flat roof; it is 40 feet long, and 34 feet broad, and is constructed so as to form a reservoir eleven inches deep to hold water.

The timber work of the roof, is the same as for the floors of the building; and its rafters have the same intervals between them as those of the floors; on these rafters battons two inches broad and one inch thick, were nailed half an inch apart from each other; and over the battons a coat of common mortar, containing equal quantities of slacked lime and of sharp sand, mixed with chopped hay, was laid half an inch thick. Slates cut in rectangles were placed with their edges close together upon the mortar, as flags or tiles are fixed in flooring.

When the mortar was dry, a coat from a quarter to three eighths of an inch thick was laid on over the slates, of a composition formed by about one part of tar, to two or three of chalk, according to the quality of the tar. The chalk was pounded exceedingly fine and boiled with the tar to a proper consistence, so as neither to be liable to crack when applied to use, or to be too soft; either of which extremes would be highly injurious. This coat of composition was spread out hot over the slates by heated iron tools, something like large smoothing irons, with long handles bent so as to be most convenient. On the following day, after putting on the first coat of composition, when the weather permitted, a second coat of the same materials, having a propor-